

AMENDMENT

U.S. Appln. No. 10/067,291

IN THE CLAIMS:

Please enter the following cancellations, amendments and/or additions:

Claims 1-22. (Cancelled).

Claim 23. (Currently Amended) An isolated DNA molecule encoding a protein comprising an amino acid sequence selected from the group consisting of:

- (a) an amino acid sequence represented by SEQ ID NO:1;
- (b) an amino acid sequence represented by SEQ ID NO:1, which contains ~~an~~ a single amino acid substitution therein, wherein said protein converts acetophenone to an optically active 1-phenylethylamine in the presence of a racemic mixture of sec-butylamine;
- (c) an amino acid sequence encoded by nucleotides 1 to 1017 of the nucleotide sequence represented by SEQ ID NO:2;
- (d) an amino acid sequence having ~~60%~~ 90% or greater amino acid identity with the amino acid sequence represented by SEQ ID NO:1;
- (e) an amino acid sequence having ~~80%~~ 90% or greater amino acid sequence identity with the amino acid sequence represented by SEQ ID NO:1, wherein said protein converts acetophenone to an optically active 1-phenylethylamine in the presence of a racemic mixture of sec-butylamine and has a MW of about 37 kDa as a monomer; and

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- (f) an amino acid sequence having ~~60%~~ 90% or greater amino acid identity with the amino acid sequence represented by SEQ ID NO:1, wherein said protein converts acetophenone to an optically active 1-phenylethylamine in the presence of a racemic mixture of sec-butylamine, and wherein said protein is obtainable from a *Mycobacterium*.

Claim 24. (Previously Presented) An isolated DNA molecule comprising a nucleotide sequence selected from the group consisting of:

- (a) a nucleotide sequence comprising nucleotides 1 to 1017 of the nucleotide sequence represented by SEQ ID NO:2; and,
- (b) a nucleotide sequence comprising nucleotides 1 to 1017 of the nucleotide sequence represented by SEQ ID NO:2, which contains a nucleotide substitution of adenine to guanine at nucleotide 4;
- (c) a nucleotide sequence of about 1020 bp which is amplified by PCR using as primers:
 - (i) an oligonucleotide comprising nucleotides 1 to 28 of the nucleotide sequence represented by SEQ ID NO:2; or an oligonucleotide comprising the nucleotide sequence represented by SEQ ID NO:11, and
 - (ii) an oligonucleotide comprising a nucleotide sequence complementary to

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the nucleotide sequence comprising
nucleotides 999 to 1020 of the
nucleotide sequence represented by SEQ
ID NO:2, and

as a template,

(iii) chromosomal DNA obtained from a
Mycobacterium and which encodes a
protein which converts acetophenone to
an optically active 1-phenylethylamine
in the presence of a racemic mixture of
sec-butylamine.

Claim 25. (Previously Presented) An isolated DNA molecule
comprising nucleotides 1 to 1017 of the nucleotide sequence
represented by SEQ ID NO:2.

Claim 26. (Previously Presented) An isolated DNA molecule
comprising nucleotides 1 to 1017 of the nucleotide sequence
represented by SEQ ID NO:2, which contains a nucleotide
substitution of adenine to guanine at nucleotide 4.

Claim 27. (Previously Presented) An isolated DNA molecule
comprising a promoter operably linked to the isolated DNA
molecule of Claim 23.

Claim 28. (Previously Presented) A vector comprising the
isolated DNA molecule Claim 23.

Claim 29. (Previously Presented) A transformant obtainable
by transducing the isolated DNA molecule of Claim 23 into a host
cell.

Claim 30. (Previously Presented) A transformant obtainable
by transducing the vector of Claim 28 into a host cell.

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Claim 31. (Previously Presented) The transformant according to Claim 29 or Claim 30, wherein the host cell is a microorganism cell.

Claim 32. (Previously Presented) A method for producing a transformant, comprising transducing the isolated DNA molecule of Claim 23 or the vector of Claim 28, into a host cell.

Claim 33. (Previously Presented) A method for producing a protein which converts acetophenone to an optically active 1-phenylethylamine in the presence of a racemic mixture of sec-butylamine comprising culturing a microorganism comprising the isolated DNA molecule of Claim 23 under suitable conditions to produce said protein.

Claim 34. (Currently Amended) The A method for producing a protein which converts acetophenone to an optically active 1-phenylethylamine in the presence of a racemic mixture of sec-butylamine comprising culturing according to Claim 33 wherein said microorganism is thea transformant obtainable by transducing the isolated DNA molecule of Claim 23 under suitable conditions to produce said protein of Claim 29 or 30.

Claim 35. (New) A method for producing a protein which converts acetophenone to an optically active 1-phenylethylamine in the presence of a racemic mixture of sec-butylamine comprising culturing the transformant obtainable by transducing the vector of Claim 28 under suitable conditions to produce said protein.